CLAIMS

1 1. A method for identifying resources associated with a communications network, the 2 method comprising: 3 defining a structured address format having a plurality of address segments, each 4 address segment being associated generally with one or more properties of a managed 5 resource of the communications network; and 6 assigning to the managed resource a structured address constructed according to 7 the structured address format, each address segment of the assigned structured address 8 having a value that conveys information about one or more properties of the managed 9 resource. 1 2. The method of claim 1, further comprising assigning a name to the managed resource and 2 associating the name with the structured address assigned to the managed resource. 1 3. The method of claim 2, further comprising translating between the name and the 2 structured address assigned to the managed resource using a domain name system 3 service. 1 4. The method of claim 1, further comprising storing the structured address in an inventory 2 system used by an operations system support (OSS) to support the communications 3 network. 4 5. The method of claim 1, further comprising storing the structured address at a network 5 element in the communications network.

- 1 6. The method of claim 1, further comprising transmitting the structured address assigned to
 2 the managed resource over the communications network in a packet.
- The method of claim 1, further comprising producing by a network element in the communications network a report containing the structured address assigned to the managed resource.
- 1 8. The method of claim 1, wherein a value assigned to one of the address segments in the
 2 structured address operates to identify a zone in the communications network to which
 3 service traffic can be transported.
- The method of claim 1, wherein a value assigned to one of the address segments of the
 structured address operates to identify a type of service.
- 1 10. The method of claim 1, wherein a value assigned to one of the address segments of the structured address operates to identify a transmission bit rate for service traffic over the communications network.
- 1 11. The method of claim 1, wherein the private communications network includes one of an optical network, an Ethernet network, and an Internet Protocol network.
- 1 12. The method of claim 1, wherein the structured address format includes a dotted decimal notation.
- 1 13. The method of claim 1, wherein the managed resource is a data service and the structured address operates as a service identifier.

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1	14.	The method of clam 1, wherein the managed resource is a path through the
2		communications network over which service traffic is transported and the structured
3		address operates as a path identifier.
1	15.	The method of claim 1, wherein the structured address is a private address.
1	16.	The method of claim 1, wherein the structured address format is a first structured address
2		format, and further comprising translating the structured addresses defined according to
3		the first structured address format into structured addresses defined according to a second
4		structured address format.
1	17.	The method of claim 1, further comprising querying a network element in the
2		communications network to take an inventory of managed resources based on structured
3		addresses recorded by the network element.
1	18.	The method of claim 1, wherein the communications network supports circuit-based
2		communications, packet-based communications, or a combination thereof.
1	19.	The method of claim 1, further comprising incorporating the structured address assigned
2		to the managed resource in an inventory system of an operations support system.
1	20.	The method of claim 1, further comprising:
2		associating a first circuit identifier with a path by which traffic of a service is
3		transported over the communications network; and

associating the structured address with the first circuit identifier.

1	21.	The method of claim 20, further comprising:
2		associating a second circuit identifier with the path; and
3		associating the structured address with the second circuit identifier.
1	22.	The method of claim 20, further comprising:
2		associating a second circuit identifier with a second path by which traffic of the
3		service is transported over the communications network; and
4		associating the structured address with the second circuit identifier.
1	23.	An inventory system for managing resources of a private communications network, the
2		inventory system comprising:
3		a structured address format having a plurality of address segments, each address
4		segment being associated generally with one or more properties of a managed resource of
5		the private communications network; and
6		means for assigning to the managed resource a structured address constructed
7		according to the structured address format, each address segment of the assigned
8		structured address having a value that conveys information about one or more properties
9		of the managed resource.
1	24.	The inventory system of claim 23, further comprising means for translating structured
2		addresses defined according to the structured address format into structured addresses
3		defined according to a second structured address format.
1	25.	The inventory system of claim 23, further comprising means for associating a name with
2		the structured address assigned to the managed resource.

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1	26.	The inventory system of claim 25, further comprising means for translating between the
2		name and the structured address assigned to the managed resource.
1	27.	An operations support system, comprising:
2		means for defining a structured address format having a plurality of address
3		segments, each address segment being associated generally with one or more properties
4		of a managed resource of a private communications network; and
5		means for assigning to the managed resource a structured address constructed
6		according to the structured address format, each address segment of the assigned
7		structured address having a value that conveys information about one or more properties
8		of the managed resource.
1	28.	The inventory system of claim 27, further comprising means for translating structured
2		addresses defined according to the structured address format into structured addresses
.3		defined according to a second structured address format.
1	29.	The inventory system of claim 27, further comprising means for associating a name with
2		the structured address assigned to the managed resource.
1	30.	The inventory system of claim 29, further comprising means for translating between the

name and the structured address assigned to the managed resource.